

In the Claims

Claim 1 (Previously presented): An array consisting of oligo- or poly-nucleotide probes applied and immobilized on a surface of a solid substrate, characterized in that sequences of a selection, or all, of the selective monocyte macrophage genes in Tables 1 to 6 are fixed on said surface.

Claim 2 (Previously presented): The array according to claim 1, characterized in that additional further genes are used, wherein said additional genes are known to be expressed in a cell and to constitute part of the basic genotype of the cell.

Claim 3 (Previously presented): The array according to claim 1, further characterized in that complementary RNA is bonded on the surface of the array with the aforementioned genes for inverse detection of the sequences in Tables 1 to 6.

Claim 4 (Previously presented): The array according to claim 1, characterized in that the genes, their partial and oligomer sequences are selected genes of rheumatoid arthritis or other chronic inflammatory diseases, relevant for the disease and side effects, before and after anti-TNF therapy.

Claim 5 (Previously presented): The array according to claim 1, characterized in that the genes, their partial and oligomer sequences are genes of the monocyte/macrophage cell system, which are regulated in a manner specific to the disease.

Claim 6 (Previously presented): The array according to claim 1, further characterized in that alleles, derivatives and/or splicing variants of the gene or partial-gene sequences and oligomer sequences are present on the surface.

Claim 7 (Previously presented): The array according to claim 1, characterized in that it contains gene sequences on the surface, which present a partial sequence identify of at least 80% in the protein-coding mRNA segments.

Claim 8 (Previously presented): The array according to claim 1, further characterized in that the surface of the substrate is coated with reactive groups, metal compounds or alloys.

Claim 9 (Previously presented): The array according to claim 1, further characterized in that the genes or gene sequences are applied in the form of RNA by cDNA spotting techniques, immobilizing techniques and techniques with oligomer synthesis or in an enantiomorphic form.

Claims 10-18 (Cancelled)

Claim 19 (Previously presented): A method for detecting individual genes wherein said method utilizes a gene or gene sequence from Tables 1 to 6.

Claim 20 (Original): Use of the genes or gene sequences according to Tables 1 to 6, characterized in that they are provided with labeling or a reporter function.

Claim 21 (Previously presented): A method for reverse detection of total RNA or messenger RNA bonded to a solid phase in an RNA array, operating on up to 500 tissue and/or blood samples wherein said method utilizes a gene or gene sequence from Tables 1 to 6.

Claim 22 (Previously presented): A method for the diagnosis or monitoring of a disease condition, including, when desired, monitoring of treatment of the disease, wherein said method comprises contacting a sample with an array consisting of oligo- or poly-nucleotide probes applied and immobilized on a surface of a solid substrate, characterized in that sequences of a selection, or all, of the monocyte macrophage genes in Tables 1 to 6 are fixed on said surface.

Claim 23 (New): The method according to the claim 22 wherein said method utilizes probes labeled for identification with fluorescence dye, an enzyme, protein or radioactive marker and permitting amplification.

Claim 24 (New): The method according to claim 22, wherein said method utilizes probe and wherein signals are amplified via coupled alkaline phosphatase, peroxidase, biotin digoxigenin, protein molecules, metal chelates of beads.

Claim 25 (New): The method according to claim 22, wherein said method utilizes probes and wherein streptavidin, metal chelates, beads or antibodies are employed for additional amplification of the signals.

Claim 26 (New): The method according to claim 22, for inverse detection of total RNA or messenger RNA fixed to the solid phase.

Claim 27 (New): The method according to claim 22, for measurement of the monocyte/macrophage activation or the inflammatory activity in the blood or in the cell tissue.

Claim 28 (New): The method according to claim 22, for fine diagnosis as well as for early detection of inflammatory diseases and rheumatoid arthritis.

Claim 29 (New): The method according to claim 22, for follow-up of side effects in anti-TNF therapy in cases of inflammatory diseases and rheumatoid arthritis.

Claim 30 (New): The method according to claim 22, for monitoring the therapy and for establishment of a prognosis in cases of inflammatory diseases and rheumatoid arthritis.

Claim 31 (New): The method according to claim 22, for the identification of pharmaceutical targets in cases of inflammatory diseases and rheumatoid arthritis.